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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of	)	
	)	
Inventor: Rene Langhans	)	Examiner: C. Goodman
	)	Group Art Unit: 3724
For: ROTARY CUTTING UNIT	)	
	)	
Serial No.: 08/883,685	)	
	)	File No. 2821-193
Filed on: June 27, 1997	)	

Hartford, Connecticut, May 21, 2001

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OFFICE OF PETITIONS

Commissioner of Patents and Trademarks
Patent and Trademark Office
Washington, D.C. 20231

PETITION TO THE COMMISSIONER

Dear Sir:

In response to the Examiner's Answer mailed March 21, 2001 to Applicant's Appeal Brief, Applicant submits this Petition pursuant to 37 C.F.R §1.181 and §1.193 for

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reconsideration of the Examiner's objections to the above-identified application for the reasons set forth herein.

INTRODUCTION

Briefly described, the present invention is directed to a circular cutter unit for equipment for cutting flat lengths of material such as sheet metal in a horizontal plane. The cutter includes upper and lower circular blades, wherein both blades lie in planes perpendicular to the horizontal plane and are in a longitudinal direction. The upper and lower circular blades are supported by upper and lower blade shafts, respectively, which are parallel with the horizontal plane and perpendicular to the longitudinal direction, both blade shafts being rotatably and rigidly affixed in a common frame. The frame having a substantially U-shape with upper and lower legs connected by a flat yoke intersecting the horizontal plane at an acute angle. A cutting gap between the circular blades is established and adjusted by loosening tightening screws and rotating a displacement bush using a pin wrench. A slot in the frame is provided for receiving the pin wrench. The cutter unit is provided with a releasably coupled driving unit having a motor connected to the lower blade, the upper blade being driven by way of the lower blade.

In a Final Office Action, the Examiner objected to the specification and drawings for the informalities and reasons set forth below. Applicant has submitted an Amendment After Final Rejection which included amendments to Figures 1 and 2 of the application in an attempt to comply with the Examiner's objections and to narrow the issues for purposes of appeal. The Examiner denied entry of the Amendment After Final Rejection citing new matter in the amendments to Figures 1 and 2. Applicant contends that no new matter is included, and the amended Figures 1 and 2 should be entered as a matter of right.

Applicant hereby petitions the Commissioner to review the Examiner's objections to the

above-identified application and the arguments set forth herein and instruct the Examiner to enter the Amendment After Final Rejection filed February 8, 2001.

~~STATEMENT OF~~ FACTS

1) Examiner has refused to enter amended FIGS. 1 and 2 included with Amendment After Final Rejection filed January 8, 2001 citing the inclusion of new matter in the Advisory Action mailed March 21, 2001. (A copy of the Letter To Official Draftsman submitted with Applicant's Amendment After Final Rejection is attached hereto as Exhibit A, the amendments are identified in red pen just as those submitted.)

2) Referring to Final Office Action, mailed March 8, 2000 the Examiner's objections are quoted as follows :

OBJECTIONS TO THE SPECIFICATION

OBJECTION No. 1: The specification is objected to because of the following: In the specification, "P. 5, line 24, the phrase ".... subtending an acute angle α of about 10°" is not clearly understood. Where is this angle shown in the drawings? Appropriate correction is required."

OBJECTIONS TO THE DRAWINGS

OBJECTION No. 2: "The drawings are objected to because references "26" and "27" should be interchanged to maintain consistency with the depiction in FIG. 1. Correction is required."

OBJECTION No. 3: "The drawings are objected to under 37 C.F.R. 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore the "means for releasably coupling" (claim 1, first occurrence) must be shown or the feature(s) cancelled from the claim(s). No new matter should be entered."

OBJECTION No. 4: "The drawings are objected to as failing to comply with 37 CFR. 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "α" (Page 5, line 24). Correction is required.

3) Applicant attempted to resolve the Examiner's objections set forth in the Final Office Action by including with the Amendment After Final Rejection amended Figures 1 and 2 in the application. A description of the amendments to the drawings with respect to the above-identified objections are:

OBJECTIONS 1 and 4: Angle α identified in the specification but not shown in the drawings (See specification, Page 5, line 24);

APPLICANT'S AMENDMENT: Figure 2 was amended by adding the symbol "α" and appropriate lead lines;

OBJECTION 2: Examiner objects to reference numerals "26" and "27" in Figure 1 which should be interchanged.

APPLICANT'S AMENDMENT: Figure 1 was amended by interchanging reference numerals "26" and "27".

ADDITIONAL AMENDMENT: Figure 1 was amended to include the slot for receiving pin wrench 25. (The slot for receiving pin wrench 25 was included in the original application in Fig. 4 as described below in paragraph 4.)

4) Figure 4 as filed with the original application shows the slot for receiving pin wrench 25; Figure 4 is a cross-sectional view of the cutter unit and clearly shows the slot for receiving pin wrench 25 as the spaces between the vertical lines in frame 51 shown spaced apart from and parallel to the outer diameters of pin wrench 25. In Figure 4, the slot for receiving pin wrench 25 although correctly drawn and clearly shown is not labeled with a reference number. Pin wrench 25 in Figure 4 is shown as positioned in the slot to adjust the cutting gap between the circular

blades.

5) Pin wrenches and the slots or elongated apertures in machinery and other devices for use therewith are well known prior art devices as shown in the copies of the Stanley Steam Car documents attached hereto as Exhibit B; Stanley Steam Cars were first used and offered for sale in the United States nearly one hundred years ago.

6) The above-identified objections were previously asserted by the Examiner in the Office Action mailed March 1, 1999.

7) Applicant, in an earlier attempt to resolve the above-identified objections, filed a timely response to the Office Action mailed March 1, 1999 and included therewith amended Figures 1 and 2 (attached hereto as Exhibit C is a copy of the Lettter to Official Draftsman and amended Figures 1 and 2 as submitted with the changes identified in red) wherein the only amendments were the following:

a) Figure 2 was amended by adding the symbol "α" and appropriate lead lines to identify the angle α the drawings;

b) Reference numbers "26" and "27" were interchanged as the mistake was correctly identified by the Examiner;

c) The labeling for the box diagram for drive unit 30 was amended by adding the word "DETACHABLE"; and

d) An additional proposed new figure was included for the Examiner's review in an attempt to clarify the method of using a pin wrench as applicable to the present invention. Applicant clearly stated in the Response to the Office Action mailed March 1, 1999 that the additional figure was only proposed. The new figure was labeled "PROPOSED NEW FIGURE".

8) The Examiner in the Final Office Action refused to enter the amended drawings filed

with the Response To Office Action mailed March 1, 1999 without elaboration; Identical objections to the drawings were made in the Final Office Action without a specific explanation therefor.

9) The Examiner acknowledged the existence of the slot for receiving pin wrench 25 as shown in Figure 4 in the personal interview held April 20, 2000. The content of the interview of April 20, 2000 is noted in the Statement of the Substance of the Interview as filed on May 4, 2000.

10) The Examiner also clearly understands the function and purpose of the pin wrench as can be ascertained from his comments in the Office Action dated March 8, 2000.

POINTS TO BE REVIEWED

Applicant's proper disclosure of the following elements:

1) The angle α at the intersection of the flat yoke and the horizontal plane defined by the flat sheet of material to be cut.

2) "Means for releasbly coupling" drive unit 30;

3) The slot for receiving pin wrench 25; and

4) The adjustability of displacement bush 13 for adjusting the cutting gap between circular blades 2 and 4 and means therefor.

5) The features included in Applicant's proposed new figure, attached hereto as Exhibit D.

ACTIONS REQUESTED

Entry of Applicant's amendments to Figures 1 and 2 identified below:

a) Identification of the angle α in Figure 2;

b) Interchanging reference numerals "26" and "27" in Figure 1;

c) Addition of the word "DETACHABLE" in the identification of the block diagram representing drive unit 30 in Figure 1;

d) Addition of the slot for receiving pin wrench 25 in Figure 1;

e) Entry of Applicant's proposed new figure as Figure 5 in the application; The proposed new figure is attached hereto as Exhibit D; and

f) Withdrawal of the Examiner's objections to the application identified in the Final Office Action dated March 2, 2001.

ARGUMENT

Following is a discussion of each of the numbered issues identified above under the heading Points To Be Reviewed:

1) Applicants' disclosure of the angle α at the intersection of the flat yoke and the horizontal plane defined by the flat sheet of material to be cut.

Referring to Applicants original application as amended by Preliminary Amendment filed November 20, 1997, page 5 lines 23-25, states in part:

> "The upper leg 51and lower leg 52 of frame 5 are joined by a flat yoke 53 subtending an acute angle α of about 10° with the horizontal plane 10 and can lie in a range of 8° to 12°, preferably 9° to 11°."

There is only one upper leg 51, one lower leg 52 and one flat yoke 53 joining legs 51 and 52 in Figures 1 and 2 of the application. Each leg and the yoke is labeled with a corresponding reference number. The reference to the acute angle α in the specification is believed to be clear and unambiguous. A careful reading of the above-identified passage of the specification in conjunction with a review of Figure 1 or Figure 2 as originally filed clearly shows the angle α. It

is well established that the angular relationship between two intersecting planes is defined by the angle subtended by lines in the planes extending perpendicular to the intersection of the two planes.

The Examiner's request to label angle α on the drawings is reasonable and Applicant has amended Figure 1 accordingly in the Amendment After Final Rejection filed February 28, 2001. The objection should be withdrawn and the amendment entered.

2) Applicant's disclosure of the "means for releasably coupling" of drive unit 30.

Referring to Applicants original application, page 6 lines 19-27 read as follows:

> "Circular cutter unit 14 is driven by a drive shaft 16 with an approximately square cross-section driving a gear 17 with a borehole 22 also of approximately square cross-section. Drive shaft 16 of all of the cutter units is driven by a drive unit 30 which includes an electric motor (not seperately shown) or any other suitable drive means. Preferably the drive unit is a non-positive drive and one which is easily detachable from shaft 16 so that the cutter units can be individually removed from the system for adjustment and maintenance. "

Clearly, the claimed element "means for releasably coupling" the drive unit is sufficiently defined in the specification and is well established prior art. Applicant's above-identified disclosure states in part: "drive shaft 16 with an approximately square cross-section....", and continues "Drive shaft 16.... driven by a drive unit 30 which includes an electric motor .... or any other suitable drive means." Also, "Preferably the drive unit is .... easily detachable from shaft 16...." (emphasis added).

Applicant submits the following well established principle of patent law:

> "[The specification] need only be reasonable with respect to the art involved; They [applicant' need not inform the layman nor disclose what the skilled already possess. They [applicant] need not describe the

conventional....The intricacies need not be disclosed ad absurdum." General Electric Co. v. Brenner, 159 USPQ 335, 337 (D.C. Cir. 1968).

The question raised is whether the scope of enablement, provided one of ordinary skill in the art by the disclosure, is commensurate with the scope of protection sought by the claims. Applicant's claim language of "means for releasably coupling" found in the original claims is clearly disclosed in the specification sufficiently to provide one skilled in the art with the well established drive shaft, motor, coupler arrangement used by the applicant in the claimed invention. The disclosure of a drive shaft driven by a drive unit, which includes an electric motor, wherein the drive unit is preferably easily detachable from the shaft, more than reasonably discloses to one skilled in the art the well established prior art configuration of a drive unit coupled to a drive shaft for powering a machine.

Applicant respectfully notes the following law on the enablement requirement of 35 U.S.C. § 112 (1) and the preferred omission of detail for the well known:

> "..... In satisfying the enablement requirement, an application need not teach, and preferably omits, that which is well known in the art... How such a teaching is set forth, whether by the use of examples, or broad descriptive terminology, is of no importance since a specification which teaches how to make and use the invention in terms which correspond in scope to the claims must be taken as complying with the first paragraph of 35 USC § 112 unless there is reason to doubt the objective truth of the statements relied upon therein for enabling support." Stahelin v. Secher, 24 USPQ 2d, 1513, 1516 (B.P.A.I. 1992, emphasis added)

Applicant contends the claim language "means for releasbly coupling" drive unit 30, is clearly well established prior art and sufficiently disclosed and enabled in the section of applicant's specification quoted on page 6 above. Thus, the Examiner's rejection thereof is not warranted and should be withdrawn.

3) and 4) Disclosure of the slot for receiving pin wrench 25 and adjustable displacement bush 13 for adjusting the cutting gap between circular blades 2 and 4;

The Examiner has objected in the Final Office Action dated March 8, 2000 to Applicant's amendment to Figure 1 to include the slot for receiving pin wrench 25 and states that the slot was not previously shown. Figure 4 as originally filed clearly shows both pin wrench 25 and the slot for receiving pin wrench 25. Figure 4 shows pin wrench 25 in the position as used; that is within the slot for receiving the pin wrench 25. Applicant's amendment to Figure 1, or in the proposed Figure 5, both include the longitudinal section of the slot for receiving pin wrench 25, previously disclosed in Figure 4, does not constitute the entry of new matter.

The Examiner's comments on page 4, line 6 of the Final Office Action mailed March 8, 2000, also, indicate he correctly understands the movements of the pin wrench and accommodation of the elongated slot therefor.

Applicant clearly discloses the means and method of adjusting the cutting gap between the cutting blades 2 and 4. The threaded displacement bush 13, tightening screws 24, stationary slotted nut 23, and pin wrench 25 are clearly identified and disclosed in the specification as follows:

> "The cutting gap between the two circular blades 2, 4 is created and adjusted by loosening tightening screws 24 clamping the fine thread flanks of slotted nut 23 against the thread flanks of the displacement bush 13 and by subsequently rotating the displacement bush 13 using pin wrench 25 . Rotation of displacement bush 13 is converted by the pitch of the play-free fine thread between the rotating displacement bush 13 and the stationary slotted nut 23 into an adjustment motion as a result of which the cutting gap can be accurately set." (Applicant's specification, page 7, lines 11- 19).

Figure 4 as originally filed shows the slot for receiving pin wrench 25; Figure 4 is a cross-sectional view of the cutter unit and clearly shows the slot for receiving pin wrench 25 as the spaces between the vertical lines in frame 51 shown spaced apart and parallel to the outer diameter of pin wrench 25. In Figure 4, the slot for receiving pin wrench 25 although correctly drawn and clearly shown is not labeled with a reference number. Pin wrench 25 in Figure 4 is shown as positioned in the slot as used to adjust the cutting gap between the circular blades. Pin wrench 25 is intended to be removed following the blade adjustment.

Furthermore, pin wrenches and the slots or elongated apertures in machinery and other devices for use therewith are well known prior art devices. As an example, attached hereto as Exhibit B are copies of Stanley Steam Car documents highlighted to show or describe a pin wrench and use of the slot or opening for receiving it and swinging the wrench. Stanley Steam Cars were first used and offered for sale in the United States nearly one hundred years ago. Also enclosed as Exhibit C is a parts supply house catalog listing pin wrenches.

Applicant again refers to the well established principals of patent law cited above in General Electric Co. v. Brenner and Stahelin v. Secher , wherein it is very clear that the applicant "need not teach and preferably omits that which is well known in the art."

Apparently the cause of the Examiner's confusion is that the slot for receiving pin wrench 25 is shown in a cross-sectional view such that the elongated portion of the slot, that which is necessary to accommodate the throw of pin wrench 25, can not be clearly identified when viewing Fig. 4. However, the slot is clearly shown and correctly drawn on Fig. 4 and the Applicant should be allowed to transfer the slot to Fig. 1 even though the same slot when transferred to Fig. 1 may look differently to one not familiar with basic drafting principles. The

Examiner's new matter rejection of Applicant's amendment to Figure 1 to include the slot for receiving pin wrench 25 is improper and should be withdrawn.

5) Entry of Applicant's Proposed New Figure

Applicant's proposed new Figure 5 (attached hereto as Exhibit D) should also be entered in the application. The proposed new figure is merely a detailed cross-sectional drawing of the displacement bush 13 within the frame 51 and the pin wrench 25 shown interior to the slot for receiving the pin wrench. Each element shown in the proposed new figure is disclosed in the original specification. Applicant's proposed new figure was drawn specifically to clarify the Examiner's understanding of the use of pin wrench 25 to adjust the cutting gap between cutting blades 2 and 4. The Examiner rejected the proposed new figure citing new matter. Again, apparently the cause of the confusion may be that the new figure shows the slot for receiving pin wrench 25 in a view perpendicular to Figure 4 and it appears different to the Examiner. However, Applicant's new figure does not include new matter. The detailed drawing to visualize the arrangement disclosed may be helpful for the Examiner and the Applicant has complied by producing the new figure. Applicant now requests the Commissioner to instruct the Examiner to enter the new figure in the application as matter well known to those skilled in the art.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that a careful reading of the specification and the drawings shows that the Applicant's amendments in response to the Examiner's objections in the Final Office Action do not introduce new matter and should be entered to narrow the issues for purposes of appeal.

Accordingly, Appellant respectfully requests the Commissioner to enter Applicant's Amendment After Final Rejection as well as the proposed new drawing identified above.

A check in the amount of $130.00 to cover the fee for filing this Petition is enclosed herewith. If additional fees are due in conjunction with this filing or if an overpayment has been made, please debit or credit deposit account No. 13-0235 accordingly.

Respectfully submitted,

By _____

Donald J. MacDonald
Registration No. 42,823
Attorney for Applicant

McCORMICK, PAULDING & HUBER
CityPlace II, 185 Asylum Street
Hartford, CT 06103-4102
(860) 549-5290

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on the date indicated below.

Kimberly A. Lawrence
NAME OF PERSON MAILING PAPER OR FEE

SIGNATURE 1-8-01
DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of	)	
	)	
René Langhans	)	Examiner: C. Goodman
	)	
on ROTARY CUTTING UNIT	)	Group Art Unit No.: 3724
	)	
Serial No.: 08/883,685	)	
	)	
Filed On: June 27, 1997	)	(Our Docket No. 2821-193)

Hartford, Connecticut, January 8, 2001

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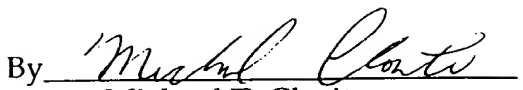
Washington, D.C. 20231

LETTER TO OFFICIAL DRAFTSMAN

Sir:

In response to paragraph 4 - 6 of the Office Action dated March 8, 2000, revised informal Figures 1 and 2 are enclosed which identify angle α and switch the references to components 26 and 27. The labeling for drive unit 30 has been changed by adding the word "detachable," and a slot for the pin wrench has been added to the cutter frame 51. The changes are marked in red. No new matter has been added to the drawings by this revision.

Respectfully submitted,

By 
Michael T. Clorite
Registration No. 44,620
Attorney for Appellant

McCORMICK, PAULDING & HUBER
CityPlace II, 185 Asylum Street
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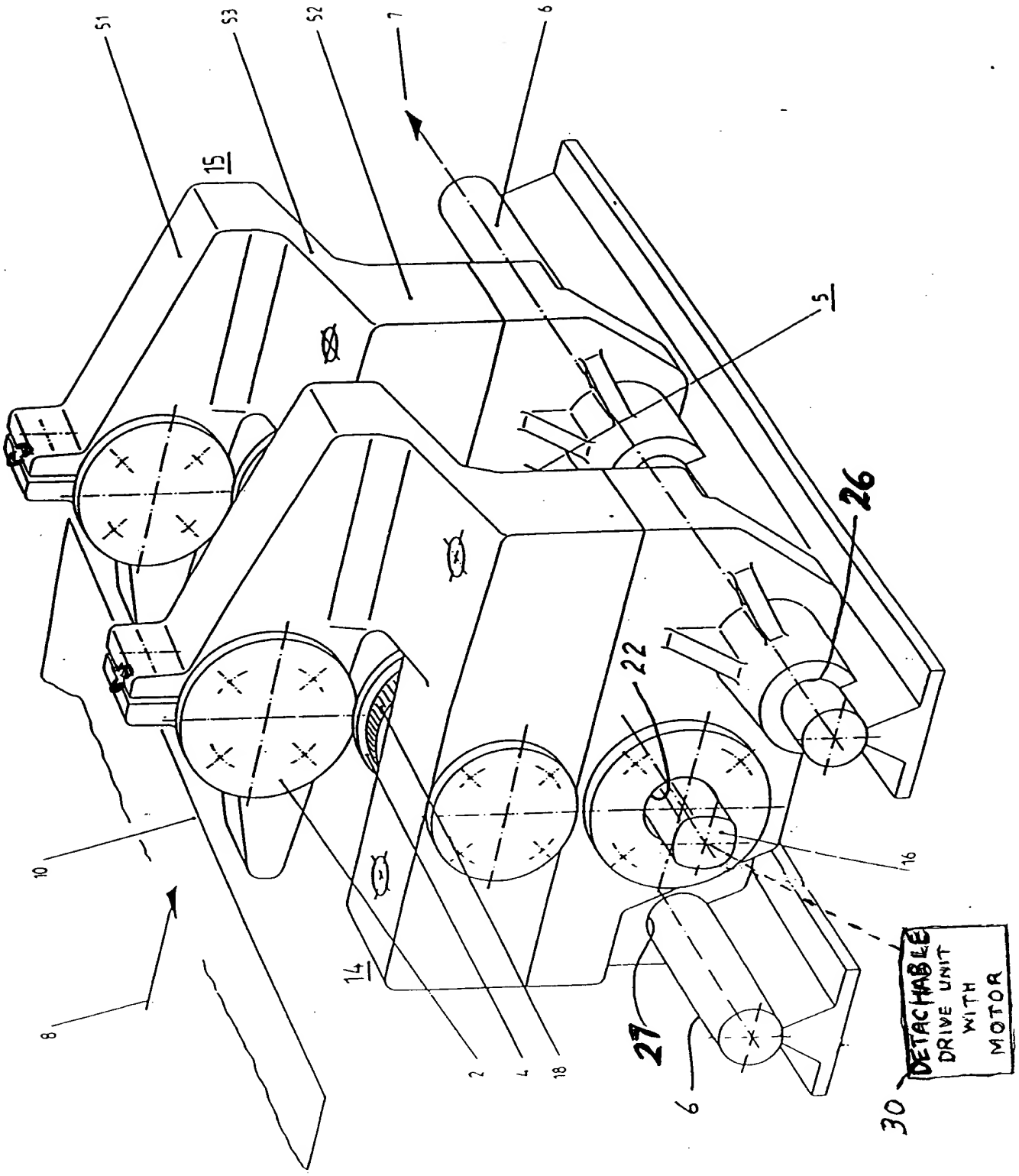
(860) 549-5290

Fig. 1



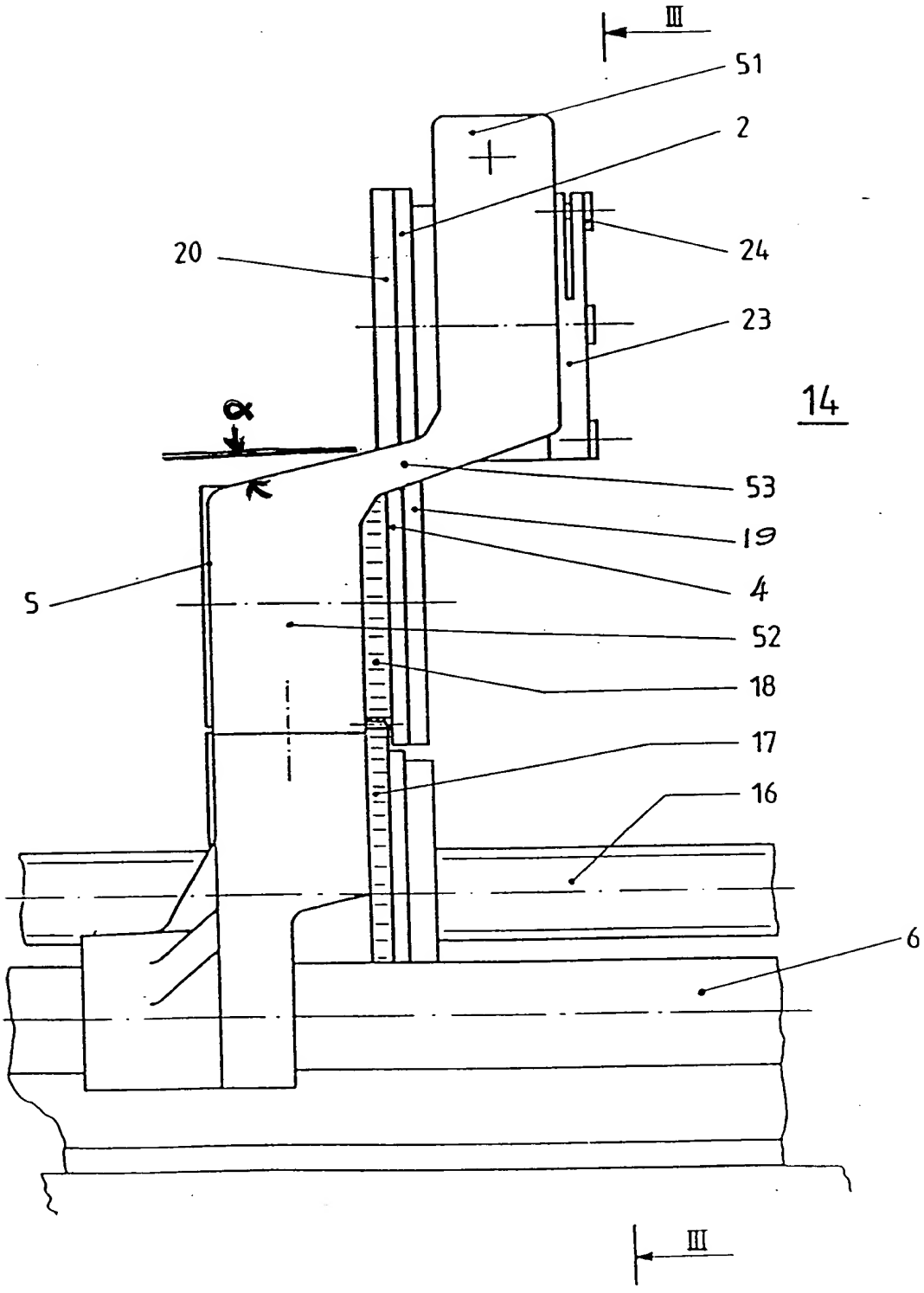


Fig. 2

Stanley

STEAM
CAR

FOREWORD

There is nothing mysterious about a Stanley car. Its wheels, axles, chassis frame, body, radiator, steering gear, brakes, storage battery and dynamo are similar to other cars. Its power plant and power control are different and are very simple. The power plant consists principally of

A simple two cylinder double acting steam engine, which is attached rigidly to the rear axle, so that the engine and rear axle; in fact, the whole driving mechanism is a unit, attached to the chassis frame at three points.

A boiler which supplies steam to the engine.

A kerosene burner which supplies heat to the boiler.

A set of tanks and pumps which automatically supply water to the boiler, fuel to the burner, and lubricating oil to the engine cylinders.

A set of automatic valves which control the supply of water to the boiler and fuel to the burner.

A radiator which condenses the exhaust steam and returns the water to the water tank.

A storage battery which supplies current for light and for starting the pilot light.

A dynamo which automatically charges the storage battery.

The power control consists of a throttle lever and a reverse pedal.

Mechanical knowledge is not necessary in order to drive a Stanley car successfully, but a thorough understanding of the car will assist one to get the best results under all conditions.

STANLEY MOTOR CARRIAGE CO.,
NEWTON, MASSACHUSETTS

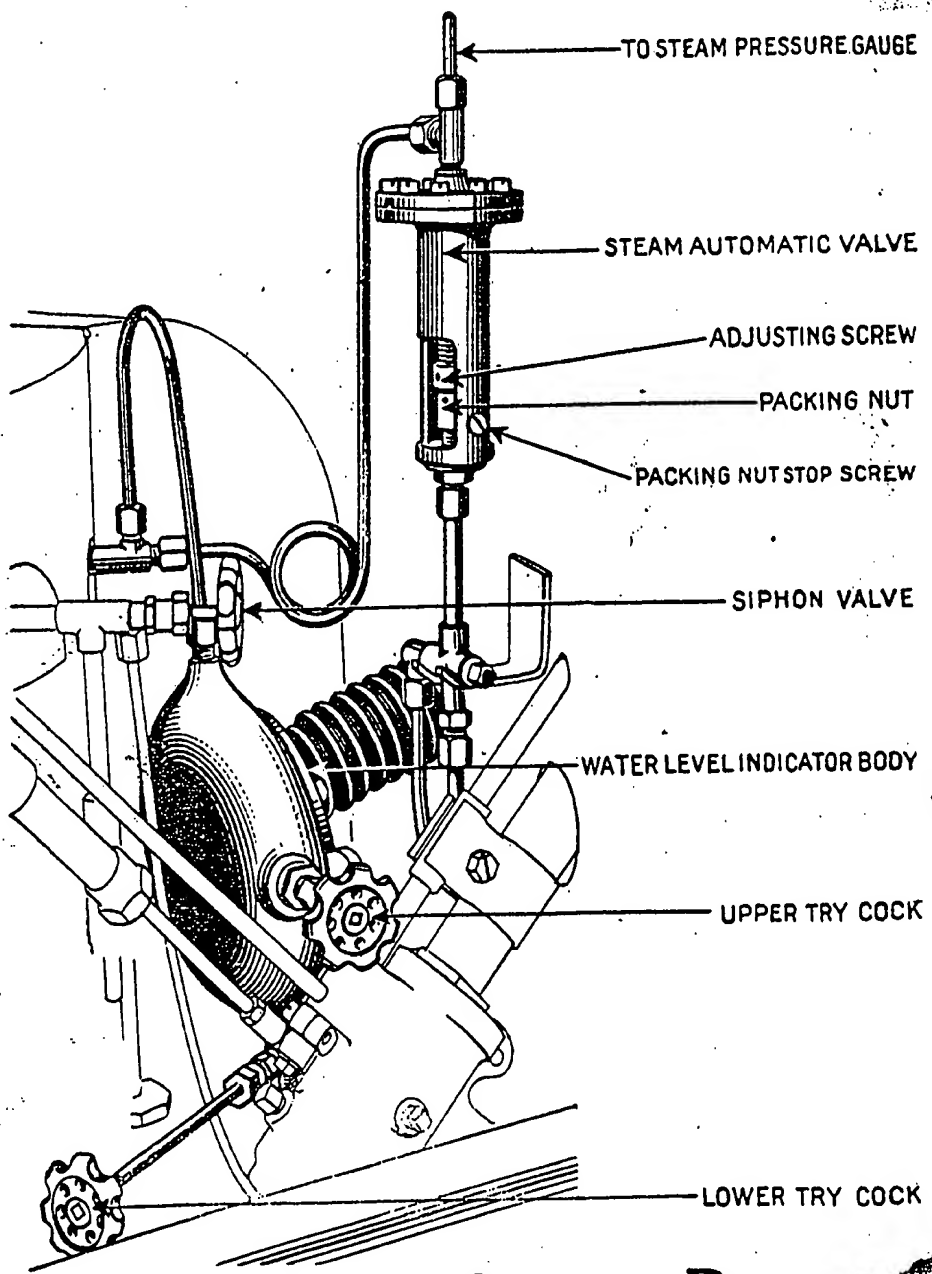


FIG 3—LEFT SIDE OF BOILER

Article 2: To Steam Up (*Continued*)

See Fig. 3

Open the lower try-cock at the bottom of the water-indicator which is between the boiler and dash on the left side, and see that runs out of it.

If it does, it indicates that the water in the boiler is above this and that is sufficient for steaming up.

More does no harm but will take more time to raise steam.

If no water runs out read Paragraph 3 of Article 4.

Repair of the Stanley Steam Automatic

By Ole B. Vikre

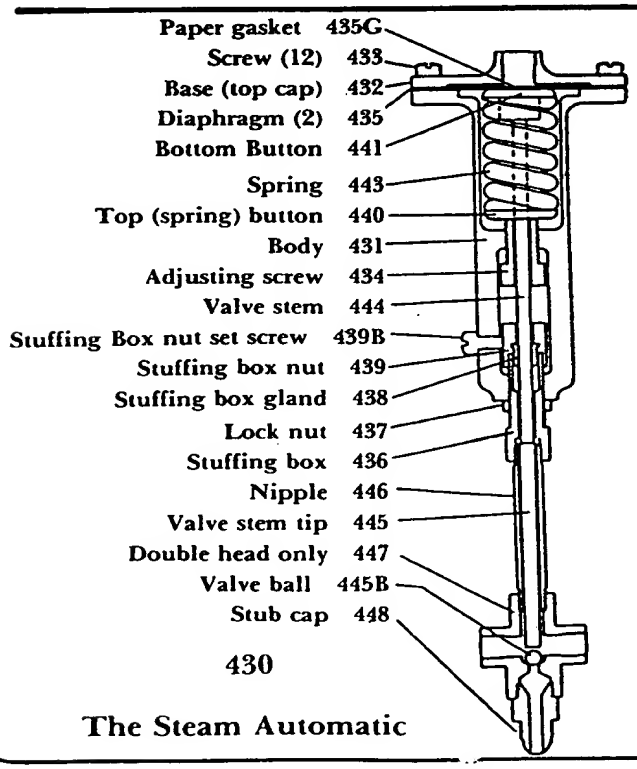
The steam automatic valve, pc. #430 (like the fuel automatic, pc. #460, see STEAM TALK article June 1986, Volume V, Number 1) is a simple diaphragm operated valve, although it works conversely to the fuel automatic.

Clean the parts with pilot fuel, and wire-brush the body, top cap, and double cap (pc. #'s 431, 432 and 447). Then machine the two twelve-hole surfaces by taking a light skim-chip to provide perfectly planed surfaces. Two 0.014" annealed beryllium copper diaphragms and a paper gasket are held between these two surfaces by means of twelve 1/4"-20-NC fillister-head screws 9/16" long.

Machine the seat in the double (or single) head (pc. #'s 442 or 447), after removing the nippel (pc. #446). This is done by turning an adapter in your lathe with a 5/8"-20-NS thread to receive the head. Using a "Letter R" drill (0.339" dia.) ground to 90 degrees included angle, just skim the seat until bright all around. Then, use a flat-bottomed "Letter R" drill to clean the shelf around the seat.

Polish the stem, particularly in way of the packing, using Crocus cloth as the final abrasive.

Assemble the double head, nipple, and stuffing box (pc.#s 447 (or 442), 446 and 436). Screw this assembly onto the same adapter used to machine the seat and ascertain that these three parts are in perfect alignment and run true.



430

The Steam Automatic

With the stem and ball in place, and before assembling the spring-case portion of the valve, pack the stuffing box.

Run a #16 drill (0.177" dia.) through the six holes in the adjusting screw and the stuffing box nut. Make a pin wrench from a piece of 1/4" drill rod about 3" long, turned down to 0.175" for a distance of 1/4" on one end. Chamfer each end 1/64" x 45 degrees to knock off any sharp edges. Then heat the small end red hot with a torch and quench in cylinder oil. This will toughen the wrench sufficiently to adjust your stuffing box nut and adjusting screw.

Assemble valve. Use Permatex cement on both sides of the paper gasket. Place the gasket against the twelve hole surface of the base, or top cap. Insert two fillister-head screws (180 degrees apart) through the top cap and gasket. Then put the two diaphragms in place. Bring the top cap and the body together and screw the two screws finger tight; then install the remaining ten screws.

Holding the body in a vise (using copper jaws), tighten the twelve screws evenly, using a heavy-duty screw driver and a 6" adjustable wrench. After assembly, bring the adjusting screw (pc. #434) up against the top spring button (pc. #440), and compress the spring about three complete turns.

With the locknut (pc. #437) backed off as far as it will go, tighten the assembly consisting of the stuffing box, nipple, double head, and stub cap (pc. #s 436, 446, 447, and 448) until the stem holds the ball firmly on the seat. Then, back off the assembly 3/4's of a turn and set the lock nut (pc. #437) against the body (pc. #431).

Check the stuffing-box nut and adjust for proper tension. Tighten the stuffing box nut set screw, making sure that there is clearance between the end of the set screw and the stuffing box nut.

Using high pressure air, set the valve to shut off at the desired pressure, usually between 500 and 600 psi. Using the heaviest duty spring in the body should make this valve work with a maximum differential of no more than 25 psi.

If these instructions are followed carefully, this valve should give trouble-free service for many years. □

445 **Valve stem tip.** Many times the valve stem tip and the valve stem (pc. #'s 445 and 444) are combined into just one stem the diameter of the valve stem.

442 **Single head.** This fitting, which contains the seat and valve ball (pc. #445B), was available with either one side outlet or two (pc. #447).

449 **Wire gauge strainer.** Although seldom found, the parts list calls for a strainer which is retained within the single head (pc. #442) or the double head (pc. #'s 447 or 447A) by means of the stub cap (pc. #448).

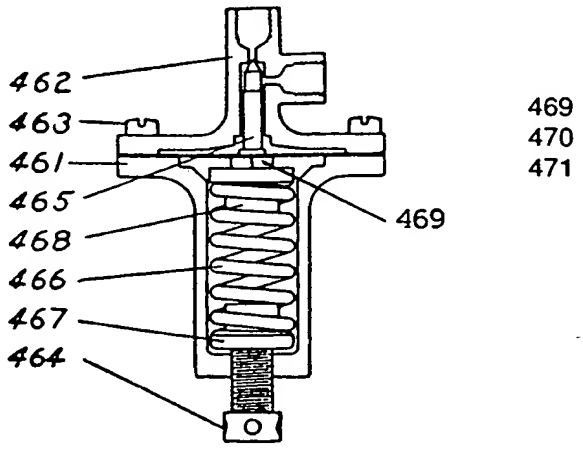
Stanley Fuel Automatics: A Modification

by Ole B. Vikre, Jr.

I first heard about this "fix" several years ago when I asked Ole's son-in-law, Brent Campbell, why he didn't bother to shut his pressure retaining valve when he parked his car for any length. How nice not to lose all your fuel pressure because you forget to shut it at the end of the day! I've been asking Ole for this ever since, so I'm especially happy to present this article now.

The Stanley fuel automatic, part #460 in the Stanley parts catalogue, has been manufactured in three distinct styles:

A. Exactly as shown in the parts catalogue as #460 — see drawing;
B. With the lower spring seat, parts catalogue #468, sitting directly on the diaphragm without the hex nut, #469;
C. The style used in the condensing cars, which has an additional part, shown in the article as piece #2, with a 7/16"-20 thread, made completely of 5/8" hex brass. It originally had a hardened steel insert that served as a seat, a spring-loaded needle also made from steel, and used a dimpled diaphragm. The needle, parts catalogue #465, and its mating seat, which was pressed into the 7/16"-20 end of piece #2, were both hardened steel. These pieces soon rusted and otherwise deteriorated, causing leakage.



460

This "new" modification uses one each of pieces #1, #2 and #3, as shown, plus a gasket and diaphragm (without a hole). It also employs a Nylatron insert (also called molybdenum-filled nylon) 1/4" in diameter x 5/16" long. This insert is placed into the end of piece #1 and swaged in place. After swaging, the end is machined square with the axis of piece #1.

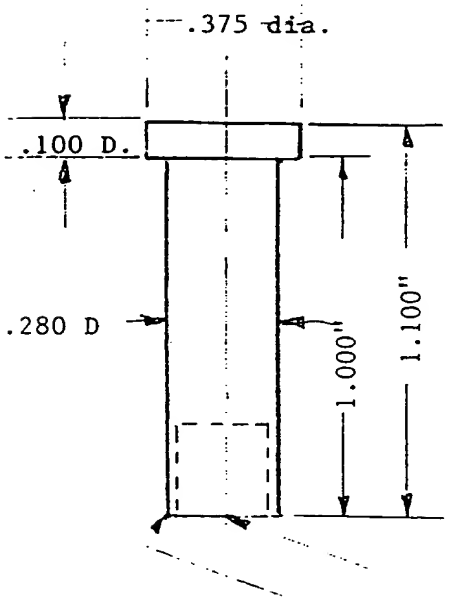
If your fuel automatic is exactly like #460 in the parts catalogue, the area in the way of the pin (or needle) will have to be carefully enlarged to accommodate pieces #1 and #3, finishing the bottom face with a flat-bottomed drill a few thousandths of an inch larger than the o.d. of your small spring, piece #3 (.422-.425").

The next step is to make up a sleeve from scrap brass the same i.d. and o.d. as the small spring, piece #3, but only 7/8" in length. Using this sleeve in place of the small spring, install it along with piece #1 into the valve cavity of parts catalogue #462 which you previously machined with the flat-bottomed drill.

The .375" diameter button on the end of piece #1 and the gasket surface of parts catalogue #642

continued on Page 15

PIECE #1



Cavity 1/4" d. x 1/4" deep for Nylatron insert.

Swage after insertion of Nylatron to retain. Insert size 1/4" d. x 5/16" long.

Acc 115043300

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Refer to pages 2694-2784 for complete index.

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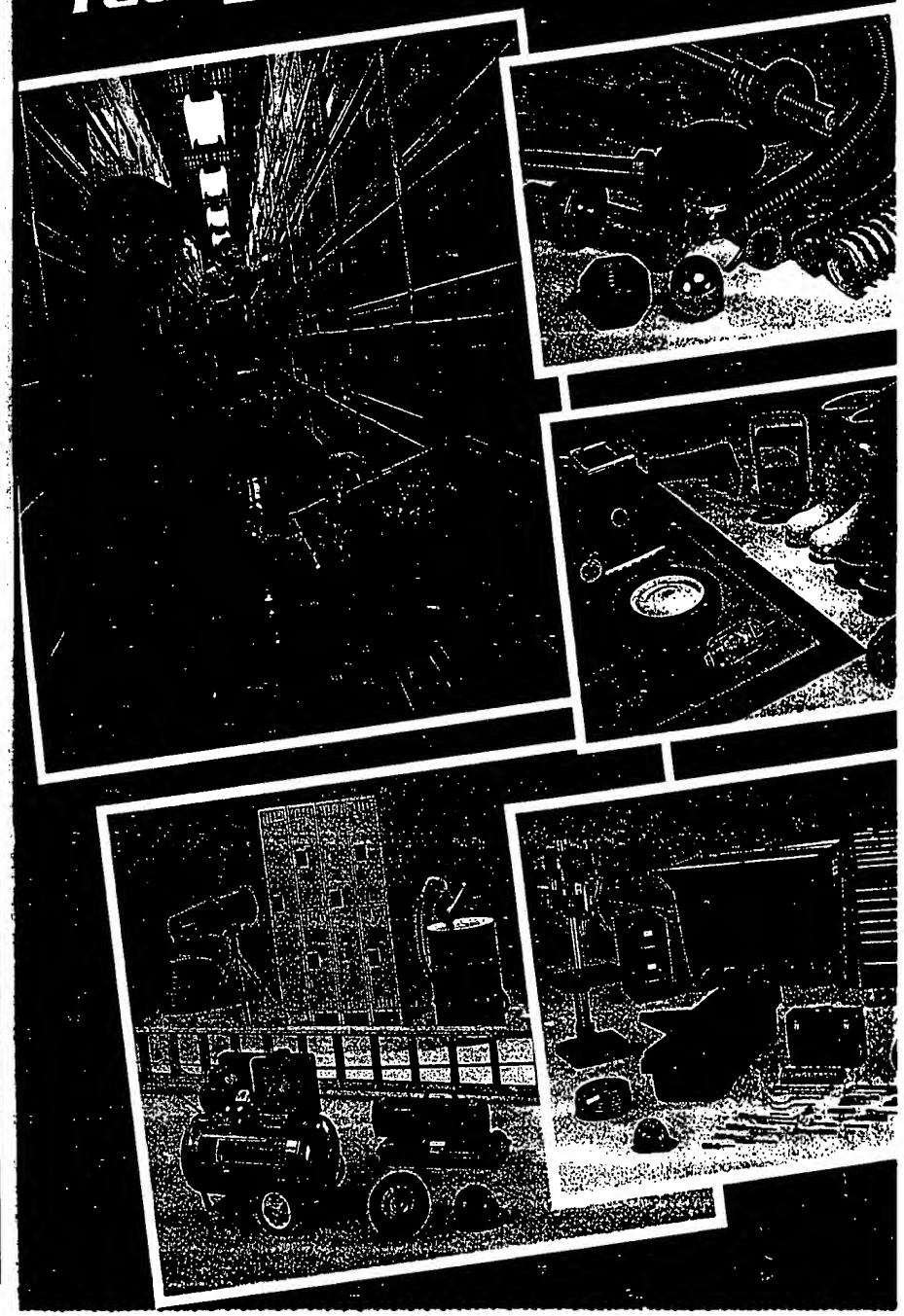
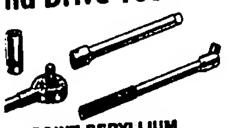


afety Tools

uare-Drive Sockets nd Drive Tools



12-POINT BERYLLIUM OPPER DEEP SOCKETS

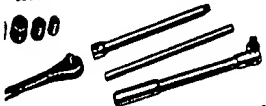
Length	No.	NET EACH
1 3/4"	6451A21	$29.68
1 3/4"	6451A22	29.95
1 3/4"	6451A23	32.67
1 3/4"	6451A24	32.95
1 7/8"	6451A25	35.40
2"	6451A27	38.39
2 1/8"	6451A29	43.02
2 1/2"	6451A31	49.74
2 1/2"	6451A32	51.19

LLIUM COPPER DRIVE TOOLS

tion	No.	NET EACH
et Wrench	6451A12	$114.31
sion Bar	6451A13	70.79
Handle	6451A14	83.86

ECE ... cludes one of each and driv. ool listed above. Set is in a plastic box.
1A11 ...NET/SET $572.33

Square-Drive Sockets and Drive Tools



T. BERYLLIUM COPPER SOCKETS

Length	No.	NET EACH
1 1/2"	6503A19	$23.36
1 1/2"	6503A21	22.30
1 15/32"	6503A22	22.30
1 33/64"	6503A23	22.30
1 33/64"	6503A24	22.30
1 1/2"	6503A25	22.30
1 1/2"	6503A26	24.77
1 1/2"	6503A27	24.51
1 1/2"	6503A28	25.83
1 1/2"	6503A29	31.64
1 31/64"	6503A38	33.45
1 3/4"	6503A32	39.83
1 3/4"	6503A33	41.28
	6503A34	45.94
	6503A35	50.09
	6503A36	53.10
	6503A37	58.23

AMPCO METAL DRIVE TOOLS

cription	No.	NET EACH
Ratchet Wrench	6503A3	$108.33
Extension Bar	6503A14	65.00
Sliding Bar	6503A15	17.79
Flex Handle	6503A16	205.82

PIECE SET—Includes one each of the e tools listed above, plus sockets in sizes 11/16", 7/8", 1 1/16", and 1 1/4". Case is non-rking aluminum.
. 6503A2 ...NET/SET $520.42

1-PIECE SET—Includes one each of the e tools listed above, plus one of each size ket listed. Set is packed in a nonsparking minum case.
. 6503A1 ...NET/SET $798.83

/4" SQUARE-DRIVE IMPACT SOCKETS—ese 12-point standard sockets are made of ged beryllium copper.

e	Length	No.	NET EACH
"	1 1/2"	6527A11	$73.66
/16"	1 1/2"	6527A13	77.10
/16"	1 3/4"	6527A14	81.52
"	1 3/4"	6527A15	90.85
/4"	2 1/4"	6527A16	98.21

NONSPARKING ALUMINUM CASE—Size 18" long × 3 1/4" wide × 1 7/8" deep.
o. 6503A17 ...NET EACH $90.97

3/4" Square-Drive Sockets and Drive Tools

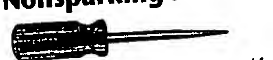
12-PT. BERYLLIUM COPPER SOCKETS

Size	Length	No.	NET EACH
1 5/16"	2 3/16"	6490A11	$81.50
1 3/8"	2 5/32"	6490A12	81.50
1 7/16"	2 3/16"	6490A13	81.50
1 1/2"	2 9/32"	6490A14	81.50
1 9/16"	2 19/64"	6490A15	84.67
1 5/8"	2 5/16"	6490A16	84.67
1 11/16"	2 13/32"	6490A17	84.67
1 3/4"	2 29/64"	6490A18	84.67
1 13/16"	2 9/16"	6490A19	89.91
1 7/8"	2 7/16"	6490A21	89.91
2"	2 35/64"	6490A22	89.91

AMPCO METAL DRIVE TOOLS

Description	No.	NET EACH
18" Ratchet Wrench	6490A31	$167.32
17" Extension Bar	6490A32	111.86
18" Flex Handle	6490A34	198.95

Nonsparking Awls



BERYLLIUM COPPER. Blade is tapered for marking and puncturing. Handle is plastic.

Blade Dia.	Blade Length	Overall Length	No.	NET EACH
1/4"	4"	7 1/4"	6453A11	$18.32
1/8"	10 1/8"	15 1/4"	6453A14	18.91

Screwdrivers

Slotted

BERYLLIUM COPPER. These screwdrivers have round blades and plastic handles.

Tip Width	Blade Length	Overall Length	No.	NET EACH
SLOTTED BLADE				
1/4"	2"	5"	6525A5	$9.26
5/16"	3"	6 1/2"	6525A1	10.97
7/16"	6"	10 1/8"	6525A2	16.29
25/64"	8"	13"	6525A3	24.23
3/16"	10"	13"	6525A7	12.44
25/64"	12"	16 7/8"	6525A4	30.71
13/32"	18"	23"	6525A8	47.77
PHILLIPS BLADE				
#1	3"	6 1/8"	6529A1	6.18
#2	4"	7 1/2"	6529A2	9.21
#3	6"	10 1/8"	6529A3	16.38
#4	8"	13"	6529A4	21.42

4-PC. SET—Slotted sizes 5/16" × 3", 7/16" × 6", 25/64" × 8"; Phillips #2 × 7 1/2" in roll-up pouch.
No. 6525A21 ...NET/SET $61.31

6-PC. SET—Slotted sizes 5/16" × 3", 7/16" × 6", 25/64" × 8"; Phillips sizes #1 × 3", #2 × 4", and #3 × 6" in roll-up pouch.
No. 6525A22 ...NET/SET $77.07

Flange Wedges

AMPCO METAL

Lg.	Blade Ht.	Blade Wd.	No.	NET EACH
3 1/4"	1/4"	1/2"	6517A1	$9.49
3 1/2"	3/8"	2"	6517A11	11.92
4"	1/2"	3/4"	6517A12	6.67
6"	1/2"	1"	6517A13	9.20
6"	3/4"	1 1/2"	6517A14	13.24
7"	3/8"	2"	6517A22	15.33
7"	1/2"	1 1/4"	6517A15	11.19
7"	3/4"	2"	6517A16	18.35
8"	3/4"	2"	6517A19	23.75
8"	1"	1 1/2"	6517A18	21.32
8"	1 5/8"	1 1/2"	6517A17	25.60
8 1/2"	1 1/4"	2"	6517A21	27.55

No. 6534A2

Tools are Ampco metal, except for screw drivers and knives which are extra-hard copper alloy. The 3-, 4-, and 6-piece sets are packed in a nonmetallic zip-up pouch. The 11- and 16-piece sets are packed in a heavy duty polyethylene box (17"L × 6 1/2"W × 7 1/2"D).

3-PIECE SET—Includes a slotted screw driver (5/16" × 3" blade), 6 1/2" combination pli ers, and 6" adjustable wrench.
No. 6533A8 ...NET/SET $86.

4-PIECE SET—Includes a slotted screw driver (5/16" × 3" blade), 6 1/2" combination pli ers, 8" adjustable wrench, and a 9" hammer claw crate opener.
No. 6533A5 ...NET/SET $123.

6-PIECE SET—Includes a slotted screw driver (5/16" × 3" blade), Phillips screwdriver (#2 × 4" blade), 6 1/2" combination pliers, 9 1/2" tongue-and-groove pliers, 8" adjustable wrench, and a 9" hammer/claw crate opener.
No. 6533A7 ...NET/SET $198.

11-PC. SET—Includes a slotted screwdriver (7/16" × 6" blade), Phillips screwdriver (#2 × blade), 6 1/2" combination pliers, 9 1/2" tongue-and-groove pliers, 6" and 10" adjustable wrenches, 10" pipe wrench, 7 1/2" putty knife, 3 1/8" blade paring knife, 12 1/2" long 12-oz. claw hammer, and an 8" shoe handle brush.
No. 6534A1 ...NET/SET $424.

16-PIECE SET—Includes a slotted screw driver (7/16" × 6" blade), Phillips screwdriver (#2 × 4" blade), 6 1/2" and 8" combination pliers, 9 1/2" tongue-and-groove pliers, 10" adjustable wrench, 14" pipe wrench, 12-point box wrenches in sizes 5/16" × 3/8", 7/16" × 1/2", 9/16" × 5/8", and 3/4" × 7/8", 1 1/4" putty knife, 3" wide blade paring knife, 12 1/2" long 12-oz. claw hammer, 8" shoe handle brush, and long deck scraper.
No. 6534A2 ...NET/SET $51

17-PIECE HAZ-MAT SET—The 5-gal. polyurethane bucket has a screw-on lid to isolate contaminated tools. A removable divider keeps tools upright. Set includes a slotted screwdriver (7/16" × 6" blade), Phillips screwdriver (#3 × 6" blade), 7" long-nose pliers with side cutter, 8" combination pliers, 8" and 12" adjustable tongue-and-groove pliers, 8" and 12" adjustable wrenches, 14" aluminum pipe wrench, 12" drum-plug wrench, 5 3/4" blade butcher knife, 7 3/4" putty knife, 15" deck scraper, spray-booth scraper, 8" shoe handle brush, 12 1/2" long 12-oz. claw hammer, 9" hammer/claw crate opener, and 12" tin snips.
No. 35105A65 ...NET/SET $68

Knives

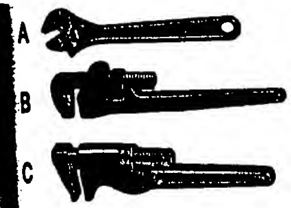
Paring

Butcher

Square-Point

BERYLLIUM COPPER. Handles are w...

Blade Length	Overall Length	No.	NET E...
PARING KNIFE			
3 1/8"	6 3/4"	3925A1	
BUTCHER KNIFE			
5 3/4"	10 1/4"	3925A2	
SQUARE-POINT KNIFE			
4"	8"	6548A11	



A

B

C

Length	Jaw Cap.	No.	NET EACH
ADJUSTABLE WRENCHES			
AMPCO METAL			
	15/16"	6502A1	$39.09
	1 1/8"	6502A2	46.72
	1 5/16"	6502A3	61.82
	1 1/2"	6502A4	78.18
	1 11/16"	6502A5	141.59
PIPE WRENCHES WITH EXTRA-HARD COPPER ALLOY JAW INSERTS			
ALUMINUM WITH BRONZE HOOK			
	1"	6461A21	$112.92
	1 1/2"	6461A22 ♦	146.02
	2"	6461A23	147.17
	2 1/2"	6461A24	171.15
	3 1/2"	6461A25	257.04
	5"	6461A26	474.63
AMPCO METAL			
	3/4"	6498A1 ♦	$90.90
	1"	6498A2	107.52
	1 1/2"	6498A3 ♦	129.82
	2"	6498A4	138.96
	2 1/2"	6498A5	187.57
	3 1/2"	6498A6	320.83
	5"	6498A7	550.00
MONKEY WRENCHES			
AMPCO METAL — Also called engineers' and railroad wrenches.			
	1 1/2"	6482A11	$91.66
	1 7/8"	6482A14	105.00
	2 1/4"	6482A15	127.27
	2 13/16"	6482A12	147.82
	3"	6482A16	174.55
	4 1/8"	6482A13	226.55

♦ Has no hanging hole in handle.

Striking-Face Box Wrenches

AMPCO METAL. Loosen frozen, rusted ... with a hammer blow. These wrenches have a 6-point hex head and straight pattern.

	Head Thk.	Overall Length	No.	NET EACH
	0.713"	6 1/2"	6507A12	$56.02
	0.778"	7 1/2"	6507A14	59.38
	0.787"	7 1/2"	6507A16	55.75
	0.992"	8 3/4"	6507A18	68.76
	0.970"	8 3/4"	6507A22	58.77
	0.929"	9 7/8"	6507A24	81.68
	0.977"	9 7/8"	6507A26	85.93
	1.072"	10 5/8"	6507A28	92.74
	1.068"	10 5/8"	6507A32	94.25
	1.219"	11 1/2"	6507A34	96.55
	1.221"	12 1/4"	6507A36	99.68
	1.158"	13 1/2"	6507A38	126.02
	1.22"	13 1/2"	6507A42	126.02
	1.387"	17"	6507A44	148.67

...CO METAL.

	Point Dia.	Overall Length	No.	NET EACH
...IGHT DRIFT PINS				
	1/4"	5 3/4"	6480A11	$8.76
	9/32"	5 3/4"	6480A14	11.16
	5/16"	8"	6480A12	13.10
	7/16"	10"	6480A13	18.22
	1/2"	10"	6480A15	29.02
...REL DRIFT PINS				
	5/16"	8"	6479A11	13.91
	5/16"	8"	6479A12	15.92
	7/16"	8"	6479A13	25.66
	11/16"	8"	6479A14	41.94

AMPCO METAL. The 12-point heads are offset at a 15° angle.

Sizes	Length	No.	NET EACH
5/16" × 3/8"	7 3/4"	6505A11	$18.63
3/8" × 7/16"	7 3/4"	6505A12	20.45
7/16" × 1/2"	7 3/4"	6505A31	23.18
1/2" × 9/16"	9"	6505A13	24.90
1/2" × 19/32"	9 1/2"	6505A14	28.10
9/16" × 5/8"	9 1/2"	6505A15	28.10
5/8" × 3/4"	10 3/4"	6505A16	29.09
11/16" × 25/32"	10 3/4"	6505A32	34.54
3/4" × 7/8"	12 3/4"	6505A33	36.36
13/16" × 7/8"	12 1/4"	6505A17	36.90
7/8" × 1"	14 3/4"	6505A18	46.00
7/8" × 1 1/16"	15"	6505A19	46.36
15/16" × 1"	14 3/4"	6505A34	47.45
15/16" × 1 1/16"	15 1/8"	6505A21	48.00
1" × 1 1/8"	15 1/8"	6505A22	51.68
1 1/16" × 1 1/8"	15 1/8"	6505A35	44.71
1 1/16" × 1 1/4"	19 1/4"	6505A23	60.65
1 1/8" × 1 5/16"	19 1/4"	6505A24	64.69
1 1/4" × 1 5/16"	19 1/4"	6505A25	64.54
1 1/4" × 1 7/16"	19 1/4"	6505A26	63.51
1 7/16" × 1 5/8"	19 1/4"	6505A27	71.66

4-PIECE SET—Includes 5/16" × 3/8", 7/16" × 1/2", 9/16" × 5/8", and 11/16" × 25/32" wrenches, packaged in a plastic pouch.
No. 6431A12 ...NET/SET $108.27

Structural Wrenches

AMPCO METAL. Wrenches have an offset handle with straight head. The tapered drift handle helps you align bolt holes.

Size	Head Thk.	Length	No.	NET EACH
1 1/16"	0.434"	11 1/2"	6501A9	$32.00
7/8"	0.605"	14"	6501A11	41.36
1 1/16"	0.664"	15"	6501A2	43.52
1 1/4"	0.665"	15"	6501A3	43.81
1 7/16"	0.833"	18"	6501A4	103.64
1 5/8"	1.106"	20"	6501A5	87.08
1 13/16"	1.100"	21 1/2"	6501A6	91.68

Combination Wrenches

AMPCO METAL. Wrenches have a 15° angled open end and a 12-point box. Openings are the same size on both ends.

Size	Length	No.	NET EACH
3/8"	7 1/4"	6506A12	$17.82
7/16"	7 1/4"	6506A13	19.27
1/2"	7 1/4"	6506A14	21.09
9/16"	8 1/4"	6506A15	22.00
5/8"	8 1/4"	6506A16	23.09
11/16"	10 1/8"	6506A17	25.91
3/4"	10 1/8"	6506A18	27.73
7/8"	13 1/4"	6506A19	41.73
1"	13 1/4"	6506A21	45.77
1 1/16"	17"	6506A22	46.15
1 1/8"	17"	6506A23	54.59
1 1/4"	19 5/8"	6506A24	58.40
1 5/16"	19 5/8"	6506A25	59.82
1 3/8"	21 1/4"	6506A26	70.44
1 7/16"	21 1/4"	6506A27	70.62
1 1/2"	21 1/4"	6506A28	70.62
1 5/8"	22"	6506A29	73.72

6-PC. SET—Sizes 7/16", 1/2", 9/16", 5/8", 3/4", and 1 1/8" packed in a roll-up pouch.
No. 6506A41 ...NET/SET $154.55

7-PC. SET—Sizes 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", and 7/8" packed in a roll-up pouch.
No. 6506A42 ...NET/SET $161.94

Pins and Punches

Stock Dia.	Point Dia.	Overall Length	No.	NET EACH
CENTER PUNCHES				
5/16"	5/32"	4"	3495A21	$8.50
3/8"	1/8"	4 1/2"	3495A22	8.84
1/2"	7/32"	5"	3495A23	10.54
5/8"	7/32"	6"	3495A24	13.62
PIN PUNCHES				
3/8"	1/8"	5 1/4"	6477A31	9.03
9/16"	1/4"	6"	6477A32	9.90
9/16"	3/8"	6 3/4"	6477A33	11.59
11/16"	1/2"	8"	6477A34	17.26
13/16"	5/8"	12"	6477A35	27.16

AMPCO METAL. Heads have a 15° angle.

Sizes	Length	No.	NET EACH
3/16" × 7/32"	3 1/2"	6499A51 •	$5.17
1/4" × 9/32"	3 1/2"	6499A61 •	5.72
1/4" × 5/16"	5 1/4"	6499A31	20.27
5/16" × 11/32"	3 1/2"	6499A62 •	5.99
3/8" × 7/16"	5 1/4"	6499A32	20.33
7/16" × 1/2"	5 1/4"	6499A11	20.52
1/2" × 5/8"	6"	6499A12	25.25
1/2" × 11/16"	6"	6499A33	23.31
9/16" × 5/8"	6"	6499A13	26.29
9/16" × 3/4"	6 3/4"	6499A14	30.53
5/8" × 3/4"	6 3/4"	6499A34	30.53
11/16" × 25/32"	6 3/4"	6499A35	32.21
11/16" × 7/8"	6 3/4"	6499A36	32.72
3/4" × 13/16"	9 1/4"	6499A41	29.24
3/4" × 7/8"	9 1/4"	6499A37	33.62
7/8" × 15/16"	9 1/4"	6499A17	35.07
7/8 × 1"	9 1/2"	6499A42	42.80
7/8" × 1 1/16"	10 3/4"	6499A38	49.96
15/16" × 1 1/16"	10 3/4"	6499A39	44.59
1" × 1 1/8"	10 3/4"	6499A18	46.00
1 1/16" × 1 1/4"	13 3/8"	6499A19	49.20
1 1/8" × 1 5/16"	13 3/8"	6499A21	54.87
1 1/4" × 1 7/16"	15 1/4"	6499A22	68.45
1 1/4" × 1 5/8"	15 1/4"	6499A43	83.60
1 7/16" × 1 5/8"	16 3/4"	6499A24	79.47
1 5/8" × 1 13/16"	18 3/4"	6499A25	128.67
1 13/16" × 2"	18 3/4"	6499A26	134.07

• Beryllium copper with straight heads.

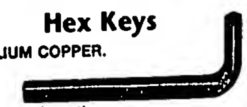
Adjustable-Head Spanner Wrenches

AMPCO METAL. Head has a movable hook.

Diameter Capacity	Hook Depth	Overall Length	No.	NET EACH
1 1/4"-3"	5/32"	8"	6504A1	$38.76
2"-4 3/4"	3/16"	11"	6504A2	45.75
4"-6 3/8"	1/4"	12"	6504A3	49.90

Hex Keys

BERYLLIUM COPPER.



Hex Size	Arm Length Short	Arm Length Long	No.	NET EACH
1/16"	3/4"	1 3/4"	6522A11	$3.30
5/64"	3/4"	1 3/4"	6522A12	2.95
3/32"	3/4"	1 7/8"	6522A13	3.50
1/8"	13/16"	2 5/16"	6522A14	3.89
9/64"	7/8"	2 1/2"	6522A32	4.04
5/32"	7/8"	2 1/2"	6522A15	4.29
3/16"	7/8"	2 7/8"	6522A16	5.00
7/32"	1 1/16"	3 1/8"	6522A17	5.83
1/4"	1 1/16"	3 7/8"	6522A18	8.86
5/16"	1 3/8"	4 1/8"	6522A31	9.46
3/8"	1 1/2"	4 1/2"	6522A21	14.44
7/16"	1 3/4"	5 1/4"	6522A22	18.95
1/2"	1 3/4"	5 1/4"	6522A23	23.67
9/16"	1 3/4"	5 3/4"	6522A24	25.96
5/8"	1 7/8"	6 1/4"	6522A25	37.52
11/16"	2 1/4"	7 1/4"	6522A26	45.53
3/4"	2 1/4"	7 1/4"	6522A27	53.41
7/8"	2 1/4"	7 1/4"	6522A28	63.97
1"	2 1/4"	7 1/4"	6522A29	99.74

10-PC. SET—Sizes 1/16", 5/64", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 5/16", and 3/8" packed in a cloth pouch.
No. 6522A41 ...NET/SET $62.30

Straight Drift Pin

Barrel Drift Pin

Center Punch

Pin Punch

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QUOTATIONS: Quotations are subject to prompt acceptance by our customer. We reserve the right to correct typographic errors and to reject orders if credit is found unsatisfactory. Prices submitted do not include taxes.

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RETURNED GOODS: Your complete satisfaction is our sincere desire. We ask only that you please call our Sales Desk or write to our Adjustment Department for shipping instructions before returning merchandise to us.

RESPONSIBILITY: Information herein is as supplied by the man-

ERRORS: Please notify us promptly of any order. We guarantee your satisfaction.

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O.S.H.A. To the best of our knowledge, our r with Federal Occupational Safety and Health Ac dards of items shown in this catalog as meetin dards. In view of the fact that the actual use d OSHA requirements have been met, the ultim

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ATTORNEY FOR APPLICANT

July 30, 1999

DATE OF SIGNATURE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of	)	
	)	
Rene Langhans	)	Group Art Unit: 3724
	)	
on ROTARY CUTTING UNIT	)	
	)	
Serial No.: 08/612,212	)	
	)	
Filed: March 6, 1996	)	(Our Docket No. 2821-193)

Hartford, Connecticut, July 30, 1999

Box OFFICIAL DRAFTSMAN
Assistant Commissioner for Patents
Washington, D.C. 20231

LETTER TO OFFICIAL DRAFTSMAN

Sir:

In response to paragraph 4 - 6 of the Office Action dated March 1, 1999, revised informal Figures 1 and 5 are enclosed which identify angle α and switch the references to components 26 and 27. The labeling for drive unit 30 has been changed by adding the word "detachable." The changes are marked in red.

In addition, a proposed new figure is included for review by the Examiner

and possible addition to the application at a later date. No new matter has been added to the drawings by this revision.

Respectfully submitted,

By _____
John C. Linderman
Registration No. 24,420
Attorney for Applicant

McCORMICK, PAULDING & HUBER
CityPlace II
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(860) 549-5290

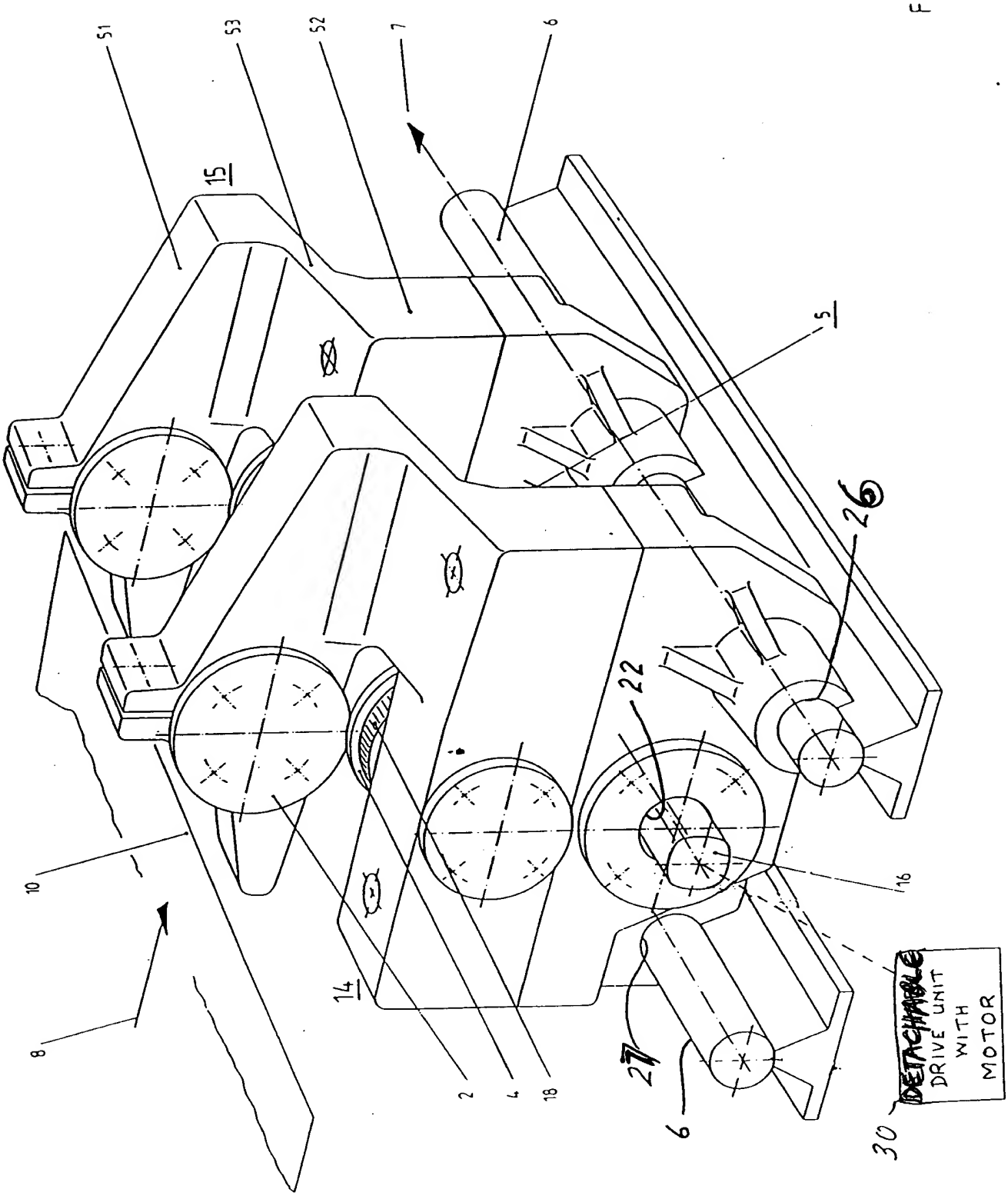

51
53
52
7
6
15
5
26
22
10
1
8
14
2
4
18
27
6
16
30
DETACHABLE
DRIVE UNIT
WITH
MOTOR

Fig. 1

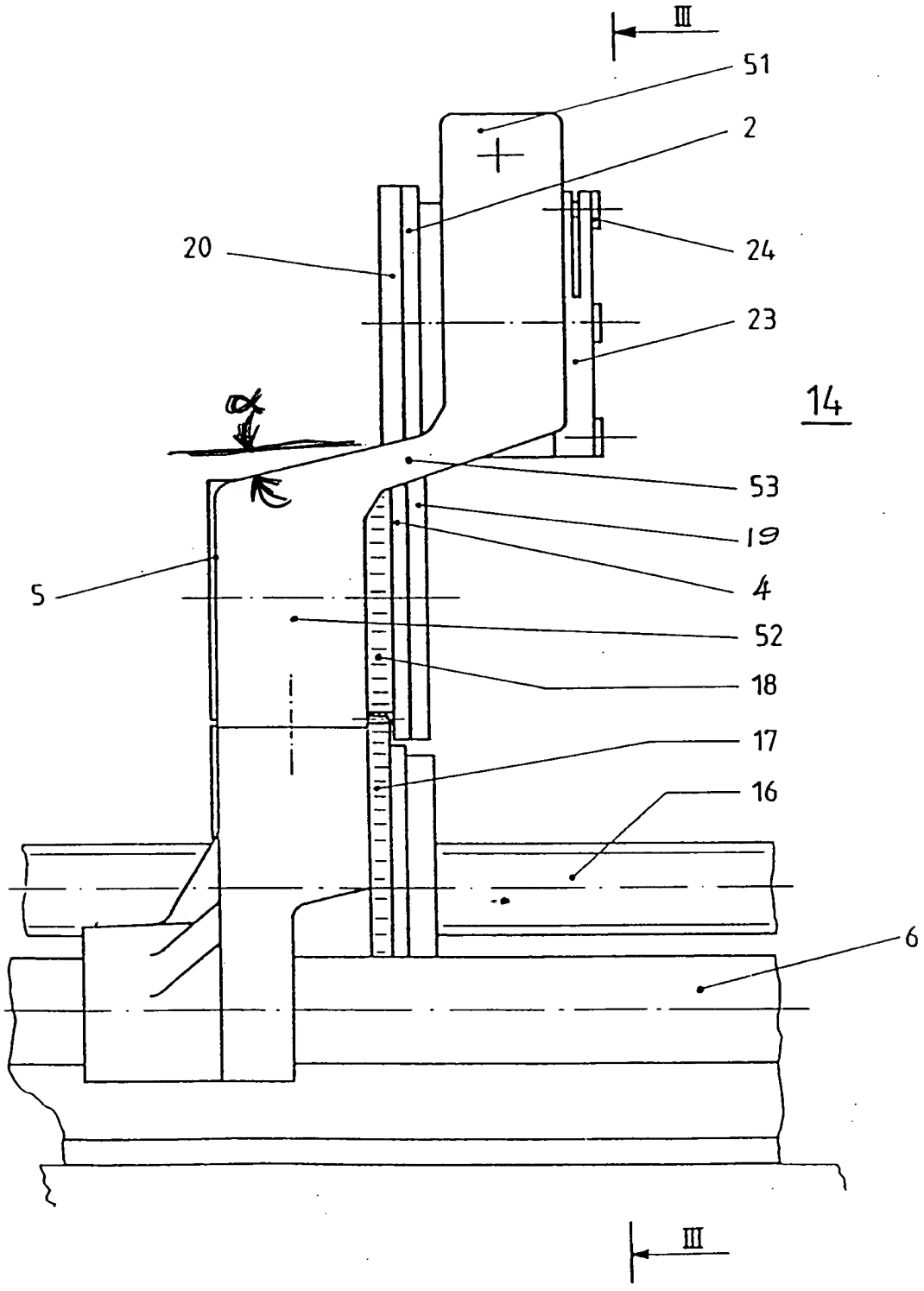
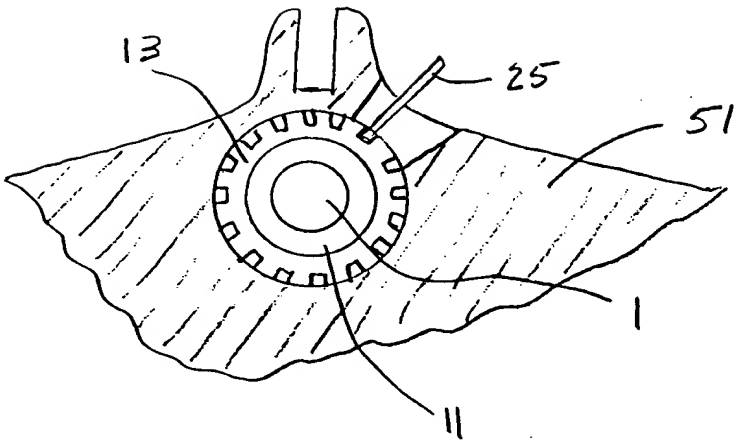


Fig. 2



Proposed NEW FIGURE (IF REQUESTED BY EXAMINER)

Ser./Pat/TM No. 08/612,212

File No. 2821-93

Name Rene Langhans

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✓ Figs 42+?

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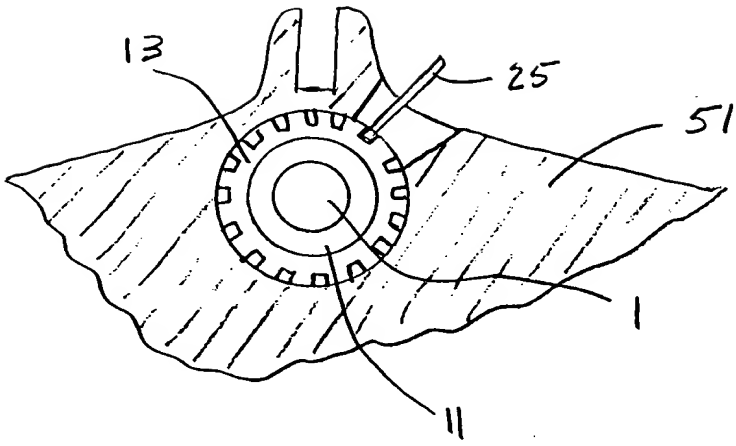

Proposed NEW FIGURE (IF REQUESTED BY EXAMINER)

FIG. 5